

fluidlab R-300



- 2-in-1 device: Cell Counter and Spectrometer
- Automated cell counting and staining-free viability
- Absorbance, scatterlight and time-series measurements
- Cell counter and staining-free viability measurements are based on digital holographic microscopy (DHM), which provides more specific insights into cell cultures through holograms

✓ Benefits

- Staining-free viability analysis
- Portable device
- Easy to use - no training required
- 2-in-1 device: Cell Counter and Spectrometer
- Usage under clean bench possible
- Low sample consumption (4-20 µl)
- Extinction & Kinetics (375-700 nm)
- Saving of calibration curve for automatic sample quantification
- No maintenance and calibration
- Results easily reproducible

Cell Count

Label-free viability measurements via holographic microscopy
Large FoV for high statistical significance
Small sample volume needed

Easy data transfer with our free „datalab“ software



Automated focus and cell count in < 20 sec

Label-free viability

Full spectral graph extinction

Time-series measurements

Storing of calibration curves for automatic quantification

Spectrometer

Full spectral graphs recorded from 375 to 700 nm
No maintenance and re-calibration needed
Portable and small

Competitor comparison

	fluidlab R-300	Countess (II, II FL, 3)	LUNA	NucleoCounter NC-3000
Application	<ul style="list-style-type: none"> - Cell count - Viability (staining-free) - Cell size distribution - Cell cluster recognition - Spectrometer: extinction & calibration curve - Kinetics 	<ul style="list-style-type: none"> - Cell count - Cell viability - Cell size distribution & average cell size - Evaluate apoptosis (II FL) - Monitor fluorescent protein expression (II FL) 	<ul style="list-style-type: none"> - Cell number - Detects live/dead cells - Cell size distribution - Discriminates cell debris 	<ul style="list-style-type: none"> - Cell number - Cell viability (based on DAPI staining & cell lysis) - Cell size distribution - Cell cycle analysis - GFP transfection efficiency
Method	Digital holographic microscope (+ spectrometer)	Brightfield microscopy	Brightfield microscopy	Fluorescence image cytometry
Used dyes	No dye necessary	Trypan blue & fluorescent dyes (II FL)	Trypan blue, Erythrosin B	Fluorophore, Acridin-Orange, DAPI
Size (mm)	128x94x33	228,6x139,7x228,6	220x210x90	290x290x310
Weight (kg)	0.24	3.63	1.2	14
Focus type	Autofocus	Autofocus (with manual focus option)	Manual focus	Autofocus
Sample Carrier	Single use glass slide	Single use /disposable slide	Single use & reusable slide - single use appr. 1,10€	Single use cassette or chamber slide - single use appr. 2€
Fluorescence yes/no	No	No (II & III), Yes (II FL)	No	Yes
cell size	3-80 µm (cell count), 8-80 µm (viability)	4-60 µm (detection), 7-60 µm (viability)	3-60 µm	4-80 µm
optimal concentration /cells/mL	1x10 ⁴ - 1x10 ⁷	1x10 ⁴ - 1x10 ⁷	5x10 ⁴ - 1x10 ⁷	5x10 ⁴ -5x10 ⁶
Field of view / mm ²	5.3	3.48(II, II FL), 3.82 (3)		
Sample volume	4 µl, 10 µl or 20 µl	10 µl	10 µl	10 - 60 µl
Time of measurement (s)	~20	10 (II, IIFL), 30 (3)	7	90
Display	3.5" color touch screen	7" touchscreen (II, II FL), 1280 x 800 LCD screen (3)	7" LCD display	
User protocols	No	Yes (up to 10 user profiles for II & II FL)	No	Yes
Connectivity	Wifi, Hotspot	USB drive (II, II FL), USB, Wifi (3)	USB drive	USB drive
Data export	PNG, Excel	JPEG, TIFF, PNG, CSV files, PDF report	TIFF, PDF report	PDF report
GLP/GMP compliance	No	No	No	Yes